# Introduction to the STC ACOUSTIC SLEEPER™ in Wood Frame



## A BETTER SOLUTION FOR FLOOR UNDERLAYMENT

- Easier installation
- Higher acoustical performance
- Lower cost per square foot
- Negative carbon emissions

The **STC ACOUSTIC SLEEPER**<sup>™</sup> is a patented neoprene rubber pad (or strip) for flooring systems that reduces impact noise transmitted to floors below. It is the key component of **STC SOUND CONTROL**'s UL Certified designs for floor underlayment assemblies in wood, concrete, and metal construction.

## THE PROBLEM OF IMPACT NOISE

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A key source of noise is activity from floors above, as sound travels through the floor structure and radiates into the space below. This "impact noise" is measured by a standard called Impact Insulation Classification (IIC).

Different elements of the floor and ceiling construction isolate noise in various amounts - measured by a standard called  $\Delta$ IIC. However, some form of acoustic insulation (beyond normal deck construction) is generally required to provide additional  $\Delta$ IIC to bring a building up to code.

In multifamily residential and hotel construction, building codes require an IIC-50 rating.



# CHALLENGES OF MARKET STANDARD SOLUTIONS

The most common solution for providing the additional acoustic insulation required by code in wood frame buildings is an **acoustical mat** on top of a **gypsum cement** underlayment.

However, gypsum cement creates multiple issues for construction, including the introduction of moisture, which can cause:



- **Risk** of complications, such as cracking, freezing, and mold;
- **Delays** to construction, caused by the time required to dry.

Meanwhile, solutions such as cork, rubber, or extruded nylon filament mats are significantly more expensive.

Luckily, STC Sound Control provides a better solution ...

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## THE ACOUSTIC SLEEPER ADVANTAGE

The STC Acoustic Sleeper system utilizes our patented STC Acoustic Sleeper pads and an additional wood panel layer – **removing** gypsum and continuous mats from deck construction. The result is a solution that is **simpler**, **higher-performance**, more **costeffective**, and more **sustainable** than the most common underlayment systems:

#### SIMPLE

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NO moisture is introduced to the building - removing risks of cracking, freezing, mold, and delays caused by time to dry

#### **HIGH-PERFORMANCE**

With a  $\Delta$ IIC-23 rating, the STC Acoustic Sleeper system outperforms gypsum, rubber, and cork systems for sound isolation.

## **COST-EFFECTIVE**

Material and labor costs for the STC Acoustic Sleeper system are about 1/2 of the cost of gypsum cement plus acoustical mat systems in wood frame.

## SUSTAINABLE

No continuous mats. No cement. Our solution offers net negative carbon emissions for the floor covering system, which – unlike other solutions – can help buildings achieve Net Zero goals.

## INSTALLATION OVERVIEW

See our video guide to installing the STC Acoustic Sleeper in wood frame by clicking or copying and pasting the link below to your web browser:

https://youtu.be/9KXZKpUCIFQ

## **APPLICATIONS & UL DESIGNS**

STC Sound Control has obtained UL Certified 1-hour & 2-hour fire-rated designs in the three most common structural systems for wood frame, with exceptional STC & IIC performance, as listed in the table below.

\*(IIC with hard surface / IIC with carpet and pad)

TYPE	1-hour	2-hour	STC	IIC*
Wood Joist	L502, L506, L514	L505	55	53 / 71
l-Joist	L589	N/A	61	55 / 73
Wood Truss	L528, L563, L574	L577	59	54 / 72

## WHAT STC CAN DO FOR YOU

The STC Acoustic Sleeper system provides a host of benefits for architects, developers, construction managers, and end-users.

We're here to answer your questions and provide any technical guidance required. If you're interested in learning more about the STC Acoustic Sleeper, just ask for our Comprehensive Guide to the STC Acoustic Sleeper brochure via email – or simply reach out to talk with us directly.

> Contact us via web, phone, or email below.